

Volkswagen MK7/Audi 8V A3 1.8T/2.0T Gen 3 Catch Can Installation















INTRODUCTION

Today's direct fuel injection systems have taken engine performance to a whole new level, but there is a drawback. With no fuel vapors to clean the intake valves, the oil vapors that are drawn into the intake from the PCV system will deposit themselves onto the valves and intake ports. Over time, this will result in an excessive carbon buildup, resulting in lost power and poor driveability. At ECS Tuning, we have taken our already successful catch can and designed a kit specifically for your VW MK7 Golf or Audi 8V A3. While the original crankcase ventilation system on your car is very well designed and has built in oil separation, there are still fine oil vapors that get through. The baffled construction and engineered flow of our catch can will separate and store these vapors in an easy to clean remote mount reservoir.

ECS Difficulty Gauge



ECS TUNING 1000 SEVILLE RD. WADSWORTH, OH 44281

Installing one of our catch can systems is an easy project, and we're going to take you through the entire process step by step so your install can go smoothly and guickly. The end result is a functional system with a great factory like appearance that you'll be proud to show off! Thank you for looking to ECS Tuning for all your performance and repair needs. We appreciate your business!

Catch Can Kits

ES2992536

ES2996743

ES3102569

Fits:

Volkswagen MK7 Golf/GTI 1.8T/2.0T

WWW.ECSTUNING.COM

Fits:

Volkswagen MK7 Golf R

Fits:

Audi 8V A3 1.8T/2.0T Gen3



TABLE OF CONTENTS

Kit Contents VW MK7 Golf/GTI, Audi 8V A3	<u>pg.4</u>
Kit Contents VW MK7 Golf R	<u>pg.5</u>
Required Tools and Equipment	<u>pg.6</u>
Shop Supplies and Materials	<u>pg.7</u>
Installation and Safety Information	<u>pg.8</u>
Installing the Catch Can System	<u>pg.9</u>
Cleaning and Maintenance	<u>pg.40</u>
Cold Weather Operation	<u>pg.45</u>
Schwaben Tools	na 46

Symbols:

The following symbols may be used throughout these instructions indicating special attention:



FORK IN THE ROAD: When there are different options within any given kit, we will direct you to the proper page and step to continue.



YIELD: Pause for a moment to double check component installation before you continue. Ignoring this can cost you time later during the installation.



CAUTION: Pay close attention to these warnings and instructions. Difficult installation, personal injury or component damage may occur if ignored.



STOP: The upcoming steps require specific preparation and/or assistance in the interest of safety. Please read ahead in the instructions and prepare before continuing.



TECH TIP: Tips and tricks to make the job go much easier.



NOTE: Additional information that may be useful to the installation depending on your application.

KIT CONTENTS - MK7 GOLF/GTI, AUDI 8V A3



Catch Can w/Dipstick and Allen Wrench



Turbo Inlet Adapter Fitting and Clip



PCV Adapter Fitting, Top Plate, Screws, and Seal



Catch Can Mounting Bracket and Hardware



Feed and Return Hose Assembly



Hose Locating Clip



Loctite



KIT CONTENTS - MK7 GOLF R



Catch Can w/Dipstick and Allen Wrench



Turbo Inlet Adapter Fitting and Clip



PCV Adapter Fitting, Top Plate, Screws, and Seal



Catch Can Mounting Bracket



Feed and Return Hose Assembly



Hose Locating Clip and **Hose Separator**



Loctite



Feed Hose Spacer and Seal



REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

Required For This Install

Available On Our Website

Protecta-Sockets (for lug nuts) <u>ES#2221243</u>	• 1/4" Drive Ratchet <u>ES#2823235</u>
• 3/8" Drive Ratchet <u>ES#2765902</u>	• 1/4" Drive Deep and Shallow Sockets ES#2823235
• 3/8" Drive Torque Wrench <u>ES#2221245</u>	• 1/4" Drive Extensions <u>ES#2823235</u>
• 3/8" Drive Deep and Shallow Sockets <u>ES#2763772</u>	• 1/4" Drive Torque Wrench
• 3/8" Drive Extensions <u>ES#2804822</u>	• Plier and Cutter Set <u>ES#2804496</u>
Hydraulic Floor Jack <u>ES#240941</u>	Flat and Phillips Screwdrivers <u>ES#2225921</u>
Torx Drivers and Sockets ES#11417/8	• Jack Stands <u>ES#2763355</u>
• 1/2" Drive Deep and Shallow Sockets <u>ES#2839106</u>	Ball Pein Hammers
• 1/2" Drive Ratchet	• Pry Bar Set <u>ES#1899378</u>
• 1/2" Drive Extensions	Electric/Cordless Drill
• 1/2" Drive Torque Wrench <u>ES#2221244</u>	Wire Strippers/Crimpers
• 1/2" Drive Breaker Bar <u>ES#2776653</u>	 Adjustable (Crescent) Type Wrenches
• File Set	• Drill Bits
Air Nozzle/Blow Gun	 Punch and Chisel Set
Bench Mounted Vise	Hex Bit (Allen) Wrenches and Sockets ES#11420
Crows Foot Wrenches	Thread Repair Tools <u>ES#1306824</u>
Hook and Pick Tool Set ES#2778980	Open/Boxed End Wrench Set <u>ES#2765907</u>

Specialty Tools

• Locking Hose Clamp Pliers <u>ES#2702616</u>



SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser Click Here
- Pig Mats for protecting your garage floor and work area from spills and stains Click Here
- Spray detailer for rapid cleaning of anything that comes into contact with your paint such as brake fluid Click Here
- Micro Fiber Towels for cleaning the paint on your car Click Here
- Latex Gloves for the extra oily and dirty jobs Click Here
- Medium and High Strength Loctite Thread lock compound to prevent bolts from backing out Click Here
- Anti-Seize Compound to prevent seizing, galling, and corrosion of fasteners Click Here
- Aerosol Brake/Parts Cleaner for cleaning and degreasing parts
- Shop Rags used for wiping hands, tools, and parts
- Penetrating oil for helping to free rusted or stuck bolts and nuts
- Mechanics wire for securing components out of the way
- Silicone spray lube for rubber components such as exhaust hangers
- Paint Marker for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties for routing and securing wiring harnesses or vacuum hoses
- Electrical tape for wrapping wiring harnesses or temporary securing of small components



INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety. Please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

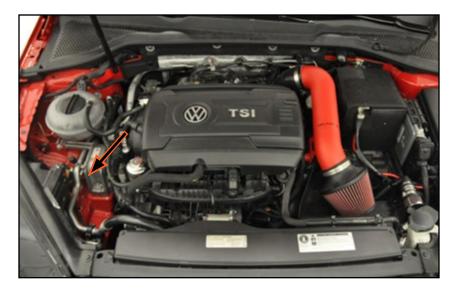
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear. **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



Never get underneath a vehicle that is supported only by a jack. Always make sure that the vehicle is securely supported on jack stands.

INSTALLING THE CATCH CAN SYSTEM

Installing your catch can system is the same on either a Volkswagen or Audi, however the Golf R differs from the rest in the location of the catch can.



On a Volkswagen MK7 Golf/GTI or the Audi 8V A3 with either the 1.8T or 2.0T Gen3 engine, the catch can will be located on the RH side of the engine compartment. It will utilize existing features of the engine mount to locate the catch can bracket.

For the MK7 Volkswagen Golf/GTI or Audi 8V A3 with the 1.8T or 2.0T engine, begin your installation on Page 10.



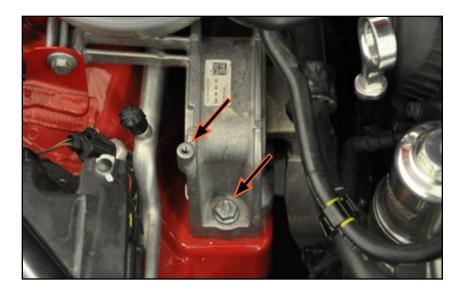
On a Volkswagen MK7 Golf R, the catch can will be located on the RH side of the engine compartment just off of the radiator core support, in front of the washer fluid reservoir. It will utilize existing bolt locations for the core support to locate the catch can bracket.

For the Volkswagen Golf R, begin your installation on Page 15.



Step 1:

Inspect the engine mount bracket on the RH (Passenger) side of the car. You will see a mounting boss with a threaded hole and a stud on the end of the forward engine mount to body bolt.



Step 2:

Unpack the catch can mounting bracket and remove the mounting hardware (M6 nut and bolt) that is attached to the upper ear. You will not need any tools, the nut and bolt will be threaded on loosely.



Step 3:

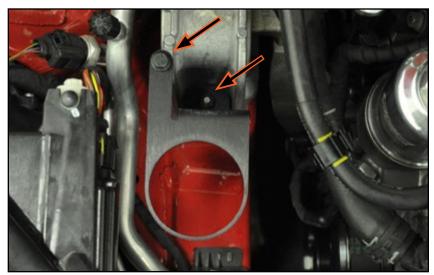
Place the catch can mounting bracket onto the mounting locations identified in step 1, as shown in the picture.

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10mm Socket, Ratchet, Extension Step 4:

Install and tighten the nut and bolt to hold the bracket in place.



Step 5:

Unpack your new catch can and take a look into the two ports in the separator. The feed side is on the right, with the holes in the baffle plate visible through the opening. The return side is on the left, with only a solid plate visible. Inspect the photo on the right and familiarize yourself with these locations.

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Step 6:

Unthread and remove the catch can reservoir from the separator.

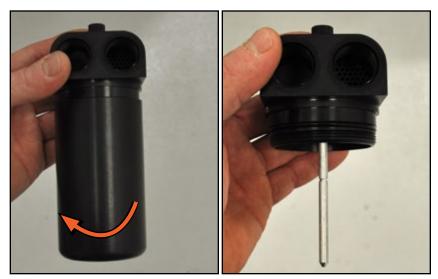


Table of Contents

Step 7:

Place the separator into the mounting bracket.

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Step 8:

Thread the catch can reservoir back onto the separator, but do not tighten it completely at this time.



Step 9:

At this point, the catch can should be mounted in the bracket, but should be loose enough so you can rotate it back and forth. This is important later when installing the hoses.



When the catch can reservoir is fully tightened, it will lock the catch can in place in the bracket. We will do this at a later step after the hoses have been installed.



Step 10:

Remove the engine cover by pulling up at the four corners.



To continue with your catch can installation, skip to Page 20.



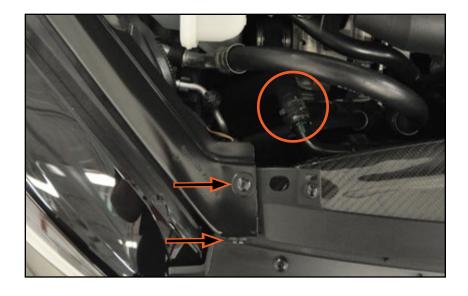


CATCH CAN INSTALLATION - MK7 GOLF R

Step 1:

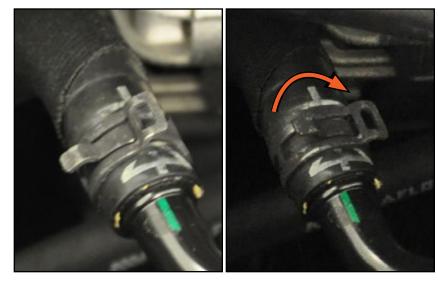
Inspect the RH side of the radiator core support. The two bolts (arrows) where it attaches to the diagonal brace will be used to mount the catch can bracket.

Also note the position of the clamp on the coolant bypass hose (circled).



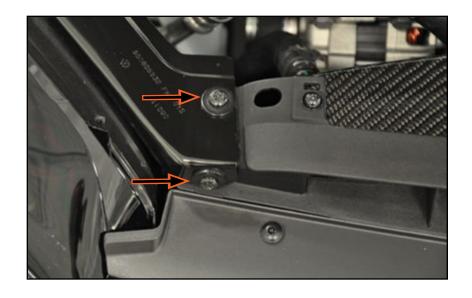
Locking Hose Clamp Pliers Step 2:

In some cases, the hose clamp is installed off center, towards the RH side of the car, which will interfere with the catch can. If the clamp on your car is off to the side as the one shown in the picture, simply loosen it and rotate it slightly to the right.



T30 Torx, Ratchet Step 3:

Remove the two screws holding the diagonal brace to the radiator core support.



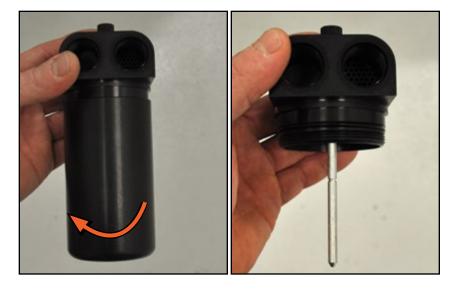
Step 4:

Unpack your new catch can and take a look into the two ports in the separator. The feed side is on the left, with the holes in the baffle plate visible through the opening. The return side is on the right, with only a solid plate visible. Inspect the photo on the right and familiarize yourself with these locations.



Step 5:

Unthread and remove the catch can reservoir from the separator.



Step 6:

Place the separator into the catch can bracket as shown, then lubricate the o-ring with clean engine oil.



CATCH CAN INSTALLATION - MK7 GOLF R

Step 7:

Thread the catch can reservoir onto the separator, but leave it slightly loose so the catch can rotates freely in the bracket.



Step 8: T30 Torx, Ratchet

Mount the catch can bracket to the radiator core support using the screws removed in step 3.

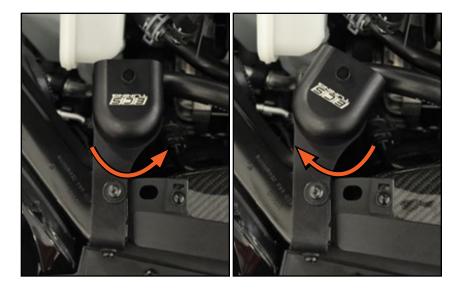


Step 9:

At this point, the catch can should be mounted in the bracket, but should be loose enough so you can rotate it back and forth. This is important later when installing the hoses.



When the catch can reservoir is fully tightened, it will lock the catch can in place in the bracket. We will do this at a later step after the hoses have been installed.



Step 10:

Remove the engine cover by pulling up at the four corners.



Step 11:

Underneath the engine cover, you'll see the four ignition coils. Locate coil #4 (arrow), which will be on the LH (Drivers side) of the engine.



Step 12: 10mm Socket, Ratchet

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Remove the nut securing the ground wire to the coil mounting bolt, then lift off the ground wire.



If the coil mounting bolt loosens instead of the nut, hold the mounting bolt with a 10mm wrench, then loosen the nut.





Step 13:

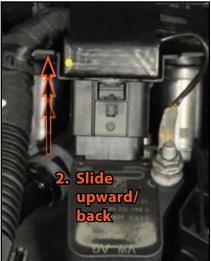
Push in the release tab on all four ignition coil electrical connectors, then pull each one up slightly so they remain released from the coils (also see step 14).



Step 14:

Push the coil harness back gently so all four connectors slide off the coils by approximately 1/2". It is not necessary to completely remove the connectors.





10mm Socket, Ratchet Step 15:

Remove the mounting bolt for coil #4.



Step 16:

Push the electrical connector off of coil #4 and remove the coil by pulling it straight up. You may have to pull fairly hard until the boot releases from the spark plug.



T30 Torx, Ratchet Step 17:

Remove the mounting screw for the crank vent hose (arrow).



Before you proceed, carefully read steps 18 through 20. The crank vent hose is held tightly in place by two retaining tabs that are part of the original oil separator on the valve cover. These tabs are important and also hold the new ECS PCV adapter fitting tightly in place. You must use caution when removing the original hose so you do not break them.



Step 18:

Removing the crank vent hose from the valve cover is a little tricky. Use a flashlight and look down on the back side of the hose end. You will see that it is held in place by two small retaining tabs.

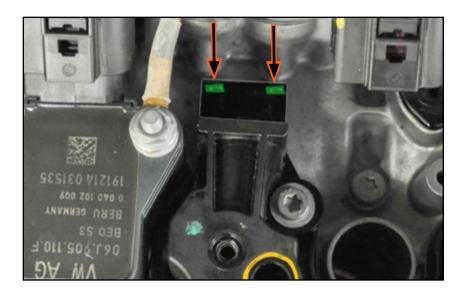




CATCH CAN INSTALLATION

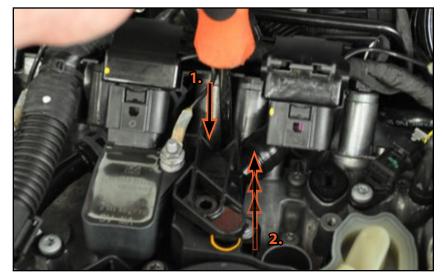
Step 19:

This view with the crank vent hose removed shows you the location of the retaining tabs.



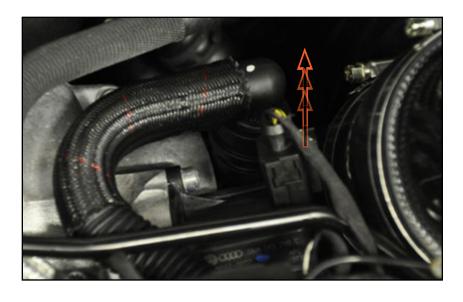
Flat Blade Screwdriver Step 20:

Using a flat blade screwdriver, press down *gently* on the retaining tabs just far enough until you are able to slide the end of the crank vent hose backwards and out of the original oil separator.



Step 21:

Now remove the crank vent hose from the turbo inlet. This hose has an internal expanding snap ring that holds it in place. Grip the end, pull upward, and rock the hose back and forth until it releases from the barb on the turbo inlet.



Step 22:

With the crank vent hose released from both ends, begin to rotate it upside down.



CATCH CAN INSTALLATION

Step 23:

Continue to rotate the hose upside down and carefully guide it out underneath the coolant air bleed line.



Step 24:

Lubricate the o-ring with clean engine oil, then push the new ECS PCV adapter fitting into the back of the original oil separator. You will have to firmly push in on the lower back corner until it snaps in place and is held on by the two retaining tabs.

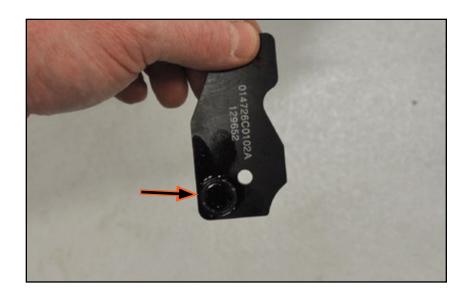




CATCH CAN INSTALLATION

Step 25:

Place the o-ring into the groove in the PCV adapter fitting top plate. Use a small amount of clean engine oil to hold it in place.



Step 26:

Set the PCV adapter fitting top plate into place with the two beveled holes lined up over the screw holes in the PCV adapter fitting. Make sure the o-ring stays in place.





CATCH CAN INSTALLATION

Step 27:

Place a drop of the included blue Loctite on the threads of each of the top plate screws.



2.5mm Allen Wrench, T30 Torx, Ratchet Step 28:

Install and tighten the two top plate screws and the crank vent hose mounting screw.



CATCH CAN INSTALLATION

Step 29:

Unpack the catch can hoses and inspect them. Regardless of which kit you have, you will see that the return hose has a 90 degree fitting on one end.



Depending on your application, the hose length and ends may differ than the picture shown, but their is only one 90 degree fitting, it is installed on the end of the return hose and will be located at the turbo inlet when installed on the car.



Step 30: AN Fitting Wrenches - or - Crescent Wrenches

Install and tighten the rear turbo inlet adapter fitting onto the 90 degree end of the return hose. Once the fitting is snug, it is only necessary to tighten it a few additional degrees.



AN fitting wrenches are designed specifically to tighten these without damaging the fitting or the finish. Using them carefully, crescent type wrenches will also do the job without damaging the fitting or finish. For extra caution, apply masking tape to the fitting before tightening.



Step 31:

Now it's time to position the hoses in their approximate location in the car.



On a MK7 Volkswagen Golf/GTI or the Audi 8V A3 with either the 1.8T or 2.0T Gen3 engine, position the hoses so the 90 degree fitting of the return is located at the turbo inlet, and the opposite ends located at the catch can, making sure they run parallel with the firewall, then underneath the coolant hoses at the coolant reservoir.

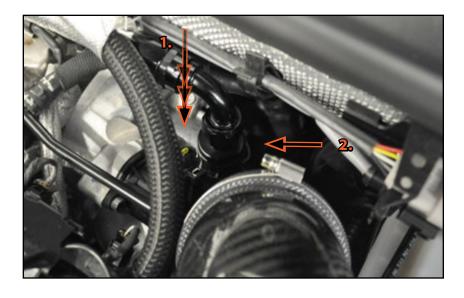


On a MK7 Volkswagen Golf R, position the hoses so the 90 degree fitting of the return is located at the turbo inlet, and the opposite ends located at the catch can, making sure they run parallel with the firewall, then underneath the coolant hoses at the coolant reservoir.

As we continue, we will give you close up views and more detailed information of hose routing.

Step 32:

Push the turbo inlet fitting (on the end of the 90 degree return hose) down onto the turbo inlet barb. Install the metal retaining clip into the groove in the fitting.



Step 33:

Make sure the feed hose runs underneath the ignition coil harness, then thread it onto the PCV adapter fitting and tighten it.



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AN fitting wrenches are designed specifically to tighten these with damaging the fitting or the finish. Using them carefully, crescent type wrenches will also do the job without damaging the fitting or finish. For extra caution, apply masking tape to the fitting before tightening.





CATCH CAN INSTALLATION

Step 34:

Reinstall the #4 coil and the ground wire, then push all four coil electrical connectors onto the coils until they are fully seated. You will hear an audible "click" when each connector locks in place.



Step 35:

Double check and make sure the hoses run underneath the coolant and fuel lines on the RH side of the engine. Make sure that no lines are tangled, kinked, or pinched.



For Volkswagen MK7 Golf/GTI or the Audi 8V A3 with either the 1.8T or 2.0T Gen3 engine, proceed to Page 33.

For Volkswagen MK7 Golf R, proceed to Page 36.

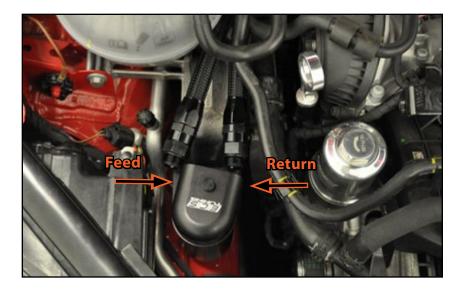


Table of Contents



Step 36:

Follow the hoses from the turbo inlet and valve cover so you can identify their position at the catch can. The hose from the valve cover connects to the feed side of the catch can. The hose from the turbo inlet connects to the return side of the catch can. As identified on Page 12 step 5, the feed and return sides of the catch can are located as shown in the picture.



Step 37:

Connect and tighten the feed hose to the catch can separator.





VOLKSWAGEN MK7/AUDI 8V A3 CATCH CAN INSTALLATION

Step 38:

Connect and tighten the return hose to the catch can separator.



Step 39:

Tighten the catch can reservoir to lock it in place in the mounting bracket.



CATCH CAN INSTALLATION - MK7 GOLF/GTI, AUDI 8V A3

VOLKSWAGEN MK7/AUDI 8V A3 CATCH CAN INSTALLATION

Step 40:

Clip the line support in place between the A/C line and the catch can hoses (arrow).



Step 41:

Confirm that the hoses are properly routed, roll the seam of the heat shield so it is located underneath the hoses (for best appearance), and reinstall the engine cover.

You Catch Can installation is complete!



Step 36:

Follow the hoses from the turbo inlet and valve cover so you can identify their position at the catch can. The hose from the valve cover connects to the feed side of the catch can. The hose from the turbo inlet connects to the return side of the catch can. As identified on Page 16 step 4, the feed and return sides of the catch can are located as shown in the picture.



Step 37:

Connect and tighten the return hose to the catch can separator.



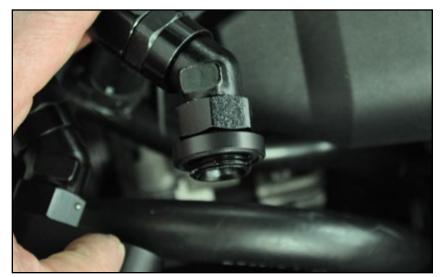
Step 38:

Lubricate the o-ring with clean engine oil, then install it onto the feed hose spacer.



Step 39:

Install the spacer onto the end of the feed hose.



Step 40:

Install and tighten the feed hose into the catch can separator.



Step 41:

Tighten the catch can reservoir to lock the catch can in place in the mounting bracket.

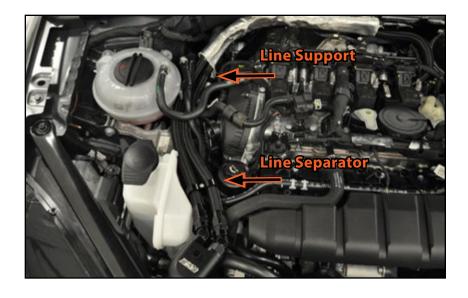




CATCH CAN INSTALLATION - MK7 GOLF R

Step 42:

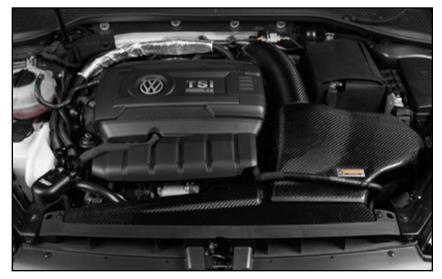
Install the line separator near the front of the hoses and clip the line support in place between the A/C line and hoses.



Step 43:

Confirm that the hoses are properly routed, roll the seam of the heat shield so it is located underneath the hoses (for best appearance), and reinstall the engine cover.

You Catch Can installation is complete!



CLEANING AND MAINTENANCE

Step 1:

We recommend that you check the level of the waste in your catch can on a regular basis. Start with once a week until you determine the amount of time it takes your car to fill the reservoir. Note that the dipstick does not go all the way to the bottom of the reservoir. When you begin to see waste register on the dipstick, you already have about an inch of buildup in the bottom. Empty and clean the reservoir when the waste registers approximately 2" up on the dipstick.



Step 2:

About twice a year, we recommend that you remove the separator for cleaning. To remove it, remove the lines and the reservoir, then lift it out of the mounting bracket.



If the o-ring seal needs to be replaced, it is available as a replacement part on our website, ES#3097721



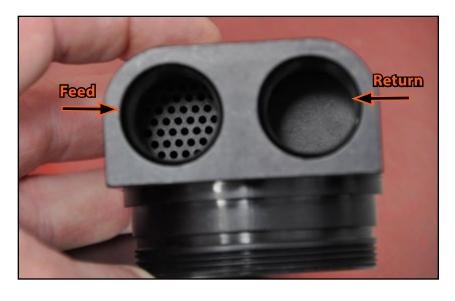
CLEANING AND MAINTENANCE

Step 3:

Once you have removed the separator, note the position of the baffle plates inside. The feed side of the separator has a number of small holes in it. Through the return side you will only be able to see a flat plate.



The catch can baffles can be reversed, and may be different than what is shown here depending on your application. It is important to note the position now so your separator is reassembled in the correct order.

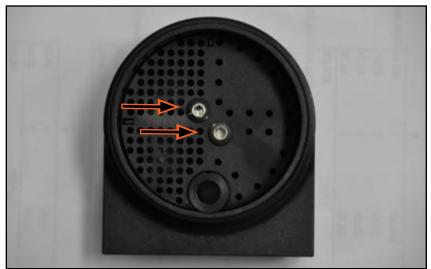


Step 4:

Using the 2.5mm Allen wrench included with the kit, remove the two baffle plate screws.



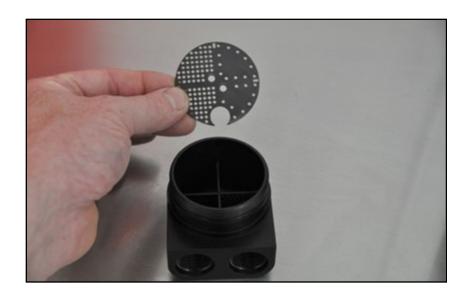
Depending on the direction of flow of your catch can, your screws may be diagonally opposite of the ones shown in the picture.



CLEANING AND MAINTENANCE

Step 5:

Lift the baffle plate out of the separator housing.



Step 6:

Lift the remaining baffles out of the separator housing.

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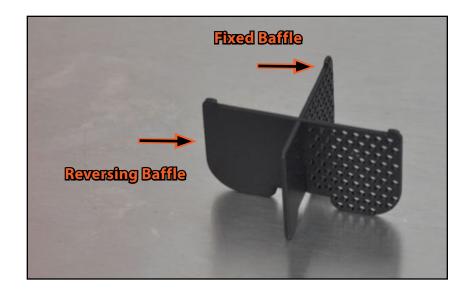


CLEANING AND MAINTENANCE

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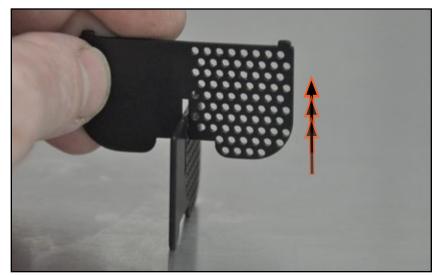
Step 7:

Note the positions of the fixed baffle and the reversing baffle.



Step 8:

Slide the two baffles apart.





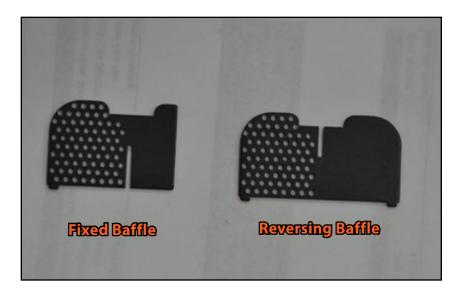
CLEANING AND MAINTENANCE

Step 9:

Clean the separator baffles, housing, and reservoir, using any mild cleanser or solvent. Note in the picture on the right that the fixed baffle is shorter than the reversing baffle.



Any mild cleanser or solvent can be used to clean the catch can, however we recommend that you test all cleansers on an inconspicuous area inside the reservoir to check for discoloration before you clean the outside surfaces.

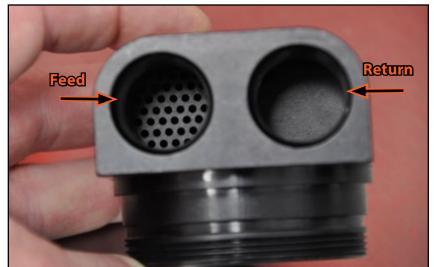


Step 10:

Reassemble the baffles into the separator housing and make sure that the baffles have been positioned correctly for your application.

Reinstall the catch can into your car.

ECS TUNING 1000 SEVILLE RD. WADSWORTH, OH 44281



CLEANING AND MAINTENANCE - COLD WEATHER



COLD TEMPERATURE WARNING

In cold temperatures, the crank vent system will generate a much greater amount of moisture which can present a risk of freezing.

VOLKSWAGEN MK7/AUDI 8V A3 CATCH CAN INSTALLATION

When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

When the temperature reaches freezing and below, we recommend disconnecting the feed and return lines and installing the original PCV hose between the turbo inlet and PCV valve assembly.



SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

At ECS Tuning, we carry a line of high quality Schwaben tools and equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.



Your Catch Can Installation is complete!



These instructions are provided as a courtesy by ECS Tuning

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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